

HTIRC-03-002

December 1, 2003



To: Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Fr: George O. Saile, Reg. No. 19,572  
28 Davis Avenue  
Poughkeepsie, N.Y. 12603

Subject: | Serial No. 10/657,504 09/08/03 |  
Kunliang Zhang et al.  
SUPPLEMENTARY SHIELD FOR CPP GMR  
| READ HEAD |  
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#### INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO-1449, Information Disclosure Citation  
In An Application.

The following Patents and/or Publications are submitted to  
comply with the duty of disclosure under CFR 1.97-1.99 and  
37 CFR 1.56. Copies of each document is included herewith.

#### CERTIFICATE OF MAILING

I hereby certify that this correspondence is being  
deposited with the United States Postal Service as first class  
mail in an envelope addressed to: Commissioner for Patents,  
P.O. Box 1450, Alexandria, VA 22313-1450, on December 8, 2003.

Stephen B. Ackerman, Reg.# 37761

Signature/Date

832 12/8/03

U.S. Patent 6,563,679 to Li et al., "Current Perpendicular-to-the Plane Magnetoresistance Read Heads with Transverse Magnetic Bias," discloses a current perpendicular-to-the-plane magnetoresistance (CPP-MR) read head which includes a top shield and a bottom shield formed of magnetically shielding, electrically-conductive material.

U.S. Patent 6,512,660 to Li et al., "Current Perpendicular-to-the-Plane Magnetoresistance Read Head with Longitudinal or Transverse Bias Provided by Current," teaches a metal pillar carrying sense current connected to the top or bottom shield.

U.S. Patent 6,496,334 to Pang et al., "Data Storage and Retrieval Apparatus with Thin Film Read Head Having Planarized Extra Gap and Shield Layers and Method of Fabrication Thereof," discloses an extra shield for a sensor element.

U.S. Patent 5,627,704 to Lederman et al., "Thin Film Giant Magnetoresistive CPP Transducer with Flux Guide Yoke Structure," discloses a giant magnetoresistive (GMR) thin film transducer employing a pair of flux guide pole members that define a magnetic transducing gap.

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U.S. Patent 5,668,688 to Dykes et al., "Current Perpendicular-to-the-Plane Spin Valve Type Magnetoresistive Transducer," describes NiFe shield layers.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. Ackerman', with a long horizontal flourish extending to the right.

Stephen B. Ackerman,  
Reg. No. 37761

Form PTO-1449

INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION  
(Use several sheets if necessary)

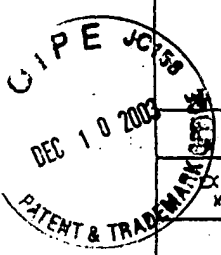
Document Number (Sequence)  
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Applicant  
Kunliang Zhang et al.

Filing Date  
09/08/03

Application Number  
10/657,504

Group Art Unit



U. S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5668688	9/16/97	Dykes et al.	360	113	5/24/96
	6563679	5/13/03	Li et al.	360	324	10/18/00
	6512660	1/28/03	Li et al.	360	324	10/17/00
	6496334	12/17/02	Pang et al.	360	319	5/26/00
	5627704	5/6/97	Lederman et al.	360	113	2/12/96

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
					YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)


EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.